

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A composite door skin structure, comprising:
about 40 weight percent to about 80 weight percent thermoplastic polymer;
up to about 30 weight percent glass fibers randomly oriented; and
~~at least one member selected from the group consisting of not less than about 5~~
~~weight percent mineral filler and not less than about 10 weight percent organic fibrous~~
~~additive~~ mica.

2. (Original) The composite door skin structure of claim 1, wherein the composite door structure comprises a molded door facing.

3. (Previously presented) The composite door skin structure of claim 1, wherein the molded door facing has a rectangular periphery and substantially planar interior and exterior surfaces facing away from one another.

4. (Previously presented) The composite door skin structure of claim 1, wherein the exterior surface comprises a plurality of panels.

5. (Currently amended) The composite door skin structure of claim ~~[[3]]~~ 4, wherein the interior surface comprises a plurality of reinforcing ribs.

6. (Currently amended) The composite door skin structure of claim 5, wherein the reinforcing ribs extend diagonally between adjacent panels of the plurality of panels.

7. (Currently amended) The composite door skin structure of claim 1, wherein the thermoplastic polymer constitutes about 50 weight percent to about 80 weight percent of the composite door skin structure.

8. (Previously presented) The composite door skin structure of claim 1, wherein the thermoplastic polymer comprises impact grade polypropylene.

9. (Previously presented) The composite door skin structure of claim 1, wherein the thermoplastic polymer comprises polystyrene.

10. (Currently amended) The composite door skin structure of claim 1, wherein the glass fibers constitute about 5 weight percent to about 30 weight percent of the composite door skin structure.

11. (Currently amended) The composite door skin structure of claim 1, wherein the glass fibers constitute about 10 weight percent to about 30 weight percent of the composite door skin structure.

12. (Previously presented) The composite door skin structure of claim 1, wherein the glass fibers have a length of between about 3 mm to about 7.62 cm.

13. (Currently amended) The composite door skin structure of claim 1, wherein the ~~mineral-filler~~ mica constitutes about 10 weight percent to about 40 weight percent of the composite door skin structure.

14. (Currently amended) The composite door skin structure of claim 1, wherein the ~~mineral-filler~~ mica constitutes about 20 weight percent to about 30 weight percent of the composite door skin structure.

15. (Canceled)

16. (Canceled)

17. (Previously presented) The composite door skin structure of claim 1, wherein the polymer has a melt flow index at 230°C of between about 0.5 g/10 min to about 500 g/10 min.

18. (Currently amended) The composite door skin structure of claim 1, wherein the ~~molded door facing~~ composite door skin structure has a coefficient of thermal expansion of between about $20 \times 10^{-6}/^{\circ}\text{C}$ to about $40 \times 10^{-6}/^{\circ}\text{C}$.

19. (Currently amended) The composite door skin structure of claim 1, wherein the ~~molded door facing~~ composite door skin structure has a stiffness between about 400,000 to about 2.0 million pounds per square inch (psi).

20. (Currently amended) The composite door skin structure of claim 1, wherein the ~~molded door facing~~ composite door skin structure has an impact strength of between about 1.5 foot pounds to about 7.5 foot pounds.

21. (Currently amended) The composite door skin structure of claim 1, wherein the ~~molded door facing~~ composite door skin structure has a toughness of between about 5.0 foot pounds to about 25.0 foot pounds.

22. (Currently amended) A door comprising:
a frame having opposite first and second sides;
first and second molded door skins fixed to the first and second sides,
respectively, at least one of which molded door skins comprising the ~~molded~~ composite
door skin structure of claim 1; and
a core component situated between the first and second molded door skins.

23. (Currently amended) A door comprising:
a frame having opposite first and second sides;
first and second molded door skins fixed to the first and second sides,
respectively, each of the first and second molded door skins respectively comprising the
~~molded door facing~~ composite door skin structure of claim 1; and
a core component situated between the first and second molded door skins.

24. (Withdrawn and currently amended) A method of making the composite door structure of claim 1, comprising:

extruding a composition comprising about 40 weight percent to about 80 weight percent thermoplastic polymer, up to about 30 weight percent glass fibers, and ~~at least one member selected from the group consisting of~~ not less than about 5 weight percent ~~mineral filler and not less than about 10 weight percent organic fibrous additive~~ mica;
and

forming the extruded composition into the composite door skin structure of claim 1, wherein the glass fibers are arranged in a random orientation in the composite door skin.

25. (Withdrawn) The method of claim 24, wherein said forming step comprises compression molding the extruded composition.

26. (Withdrawn) The method of claim 24, wherein said forming step comprises thermoforming the extruded composition.

27. (Withdrawn and currently amended) The method of claim [[24]] 26, wherein the thermoforming step comprises pressure forming.

28. (Withdrawn and currently amended) A method of making a door, comprising:

extruding a composition comprising about 40 weight percent to about 80 weight percent thermoplastic polymer, up to about 30 weight percent glass fibers, and ~~at least one member selected from the group consisting of a~~ not less than about 5 weight percent ~~mineral filler and not less than about 10 weight organic fibrous additive~~ mica;

forming the extruded composition into the composite door skin structure of claim 1, the composite door skin structure comprising a first door skin in which the glass fibers are arranged in a random orientation; and

assembling the first door skin, a second door skin, a foam core, and a peripheral frame into a door in which the first and second door skins are fixed on opposite sides of the peripheral frame and the foam core is situated between the first and second door skins.

29. (Withdrawn and currently amended) A method of making a door, comprising:

extruding a composition comprising about 40 weight percent to about 80 weight percent thermoplastic polymer, up to about 30 weight percent glass fibers, and ~~at least~~

~~one member selected from the group consisting of not less than about 5 weight percent mineral filler and not less than about 10 weight percent organic fibrous additive mica;~~

forming the extruded composition into a plurality of the composite door skin structures of claim 1, the composite door skin structures comprising a first door skin and a second door skin each having randomly oriented glass fibers; and

assembling the first door skin, the second door skin, a foam core, and a peripheral frame into a door in which the first and second door skins are fixed on opposite sides of the peripheral frame and the foam core is situated between the first and second door skins.

30. (New) The composite door skin structure of claim 1, wherein:

the glass fibers constitute about 10 weight percent to about 30 weight percent of the composite door skin structure; and

the mica constitutes about 5 weight percent to about 30 weight percent of the composite door skin structure.

31. (New) The door of claim 22, wherein:

the glass fibers constitute about 10 weight percent to about 30 weight percent of the composite door skin structure; and

the mica constitutes about 5 weight percent to about 30 weight percent of the composite door skin structure.

32. (New) The door of claim 23, wherein:

the glass fibers constitute about 10 weight percent to about 30 weight percent of the composite door skin structure; and

the mica constitutes about 5 weight percent to about 30 weight percent of the composite door skin structure.